

# TWIN ROTORS

We can see in FIG.3 that rotor 1 and rotor 2 has only one shaft. This is a single shaft twin rotor turbine like the single shaft TWIN-ROTOR TZUY TURBINE. The rotor 1 is in between the cover 1 and cover 2. The rotor 2 is also in between the cover 3 and cover 4. We can notice that the exposed blade or protruding blade in rotor 1 is facing the cover 1. We can also notice that the exposed blade or protruding blade in rotor 2 is facing the cover 4. This idea of physical arrangement of the two rotors is to neutralize each rotor side thrust.

When the powerful working fluid enters the first turbine between cover 1 and rotor 1, since the cover 1 is stationary and rotor 1 is movable, the rotor 1 will be pushed towards the center of the shaft. The powerful working fluid will also enter the second turbine between the rotor 2 and cover 4. Since the cover 4 is stationary and the rotor 2 is movable, the rotor 2 will also be pushed towards the center of the shaft. So, both rotors 1 and 2 are pushed simultaneously towards the center of the shaft.

Since rotor 1 and rotor 2 use the same shaft, the side thrust in rotor 1 to the center of the shaft is neutralized by the side thrust to the center of the shaft in rotor 2. Therefore when the two rotors has the same force of side thrust towards the center of the shaft it's understood that the two rotors with opposite side thrust can neutralize and reduce tremendously the friction in twin rotors.

Here in FIG. 4 the blade that protrudes in rotor 1 and the blade that protrudes in rotor 2 are different than in FIG.3. When the working fluid enters the first turbine between rotor 1 and cover 2, since the rotor 1 is movable and cover 2 is stationary the rotor 1 will be pushed by the working fluid towards cover 1. And when the working fluid enters the second turbine between the rotor 2 and cover 3, the rotor will be pushed by the working fluid towards the cover 4. Rotor 1 and rotor 2 has the same shaft. When rotor 1 is pushed away from the center of the shaft and rotor 2 is pushed also away from the center of the shaft simultaneously rotor 1 side thrust will be neutralized by the rotor 2 opposite side thrust. Therefore using a single shaft with two rotors having opposite side thrust will make the twin rotors very powerful with regards to its rotational force. The principle and the example that I presented is also used by the TWIN-ROTOR TZUY TURBINE that can be applied in electrical power generation and in the new propulsion system to power transportation vehicles on land, water and possibly air.